REMARKS/ARGUMENTS

Claims 1-11 and 24-35 are pending. The Examiner rejected claims 1-11 and 24-35 including independent claims under 35 USC 103 as being unpatentable over RFC 791: Internet Protocol-DARPA Internet Program Protocol Specification (hereafter RFC 791), the "applicant's disclosure of prior art", and US Patent No. 7,149,769 (Lubber).

The Examiner acknowledges that RFC 791 and applicant's disclosure of prior art do not teach or suggest the above noted claim recitations. The Examiner relies on Lubber in combination with RFC 791 to describe these recitations. The Examiner argues that Lubber states "messages are formatted as ELS fibre channel frames" and it would be obvious to modify the teachings of RFC 791 to incorporate that which is taught by Lubber because "in a Fibre Channel embodiment, Fibre Channel messages are sent using ELS that allow a Fibre Channel port on one device to request a function or service from another port."

Lubber mentions ELS in only one paragraph. "In an SAN environment, waiting for the arrival of a subsequent command frame can take a substantial amount of time. The protocol in accordance with the present invention includes "heartbeat" or "ping" messages that are transmitted from the source to each destination following transmission of a frame carrying the command information. These heartbeat messages are formatted as extended link service (ELS) fibre channel frames and carry immediate data indicating the group sequence number of the GSN of the most recently transmitted operation. The heartbeat frames are preferably transmitted at regular intervals such as once per second from controllers at each end of a tunnel, and will result in an ELS acknowledge response from the destination back to the source. The interval for sending heartbeat frames does not need to be fixed or regular, and may be adapted to balance overhead with performance by increasing the interval to reduce overhead or decreasing the interval to speed detection of dropped frames." (Figure 9 Description, Second Paragraph)

The Applicants acknowledge that Lubber does describe heartbeat messages formatted as ELS messages. However, neither Lubber in itself nor the Examiner's combination of references teach or suggest wherein the first ELS message including a first ELS message fragment is associated with a first exchange and the second ELS message including a second ELS message fragment is associated with a second exchange. The cited art also does not either alone or in combination teach or suggest sending the second message fragment after the first exchange is complete.

Nonetheless, to facilitate prosecution, the independent claims have been amended to recite "sending a Process Login (PLOGI) message to a target entity, wherein the PLOGI process allows a source entity and the target entity to determine that an authentication message has a length that exceeds an authentication the message length supported by the target entity in a fibre channel Fabric"

This amendment is supported in at least Figure 5 and associated description. For example, "In this sequence, a PLOGI (Process Login) message is the initial exchange (Exchange a) between the initiating entity and the responding entity. The responding entity replies with a PLOGI Accept. The PLOGI process allows the two involved entities to negotiate the communication parameters which will be used in any subsequent communication between them. In this phase the two entities discover if one or both of them have some limitations in supporting ELSs." [0024]

It is acknowledged that fragmentation is well known in particular contexts. However, fragmentation typically occurs in a network environment when network devices have a maximum supported packet size. The network fragments the packets and does not wait to transmit the fragments but instead transmits the fragments when possible. By contrast, the techniques of the present invention recognize that other fragmentation may occur, but specifically identify authentication message limitations during a PLOGI process. Limitations determined during this PLOGI process are used to specifically fragment ELS authentication messages. Other message may remain non-fragmented. The materials cited by the Examiner do not teach or suggest determining any authentication message limitations during any PLOGI process.

Furthermore, new claim 36 recites "further comprising means for sending an RPBC (Report Port Buffer Conditions) message to the target entity, wherein the target entity responds with information regarding a maximum authentication message length supported by the target entity." This claim is supported in Figure 5 and associated description. For example, "If one or both the involved entities have ELS support limitations, in the next Exchange b, the initiating entity sends an RPBC (Report Port Buffer Conditions) message and the responding entity issues an RPBC Accept. In this phase, each involved entity discovers the specific limitations of the other one, in particular the maximum size of an ELS message that each of them is able to receive." [0025]

None of the materials cited by the Examiner teach or suggest sending an RPBC message to determine specific ELS limitations of the target entity.

Still furthermore, new claim 37 recites "further comprising means for sending information regarding a maximum authentication message length supported by the source entity." This amendment is supported in Figure 5 and associated description. For example, ""If one or both the involved entities have ELS support limitations, in the next Exchange b, the initiating entity sends an RPBC (Report Port Buffer Conditions) message and the responding entity issues an RPBC Accept. In this phase, each involved entity discovers the specific limitations of the other one, in particular the maximum size of an ELS message that each of them is able to receive." [0025]

None of the materials cited by the Examiner teach or suggest providing information about ELS limitations associated with a source entity.

Even if it is assumed that there is sufficient motivation to combine the references, the combined references still do not teach or suggest fragmenting an authentication message into a first message fragment and a second message fragment which are sent in different exchanges. It is respectfully submitted that the Examiner proposed combination of references, even if sufficient motivation is assumed, would only teach fragmenting an ELS message. The fragments of the message would likely be transmitted in a single exchange without any suggestion that the fragments should be transmitted in different exchanges, with a second fragment not transmitted until a first exchange is complete. Conventional fragmentation mechanisms do not make separate first exchange and second exchange distinctions and do not send a second fragment upon "determining" that the first exchange is complete.

In light of the above remarks, the rejections to the independent claims are believed overcome for at least the reasons noted above. Applicants' Representative believes that all pending claims are allowable in their present form. If the Examiner has any questions or concerns for Applicants' Representative, the Examiner is encouraged to contact the Undersigned at the number provided below. If any additional fees are due in connection with this filing, the Commissioner is authorized to charge Deposit Account 504480 (Order No. ANDIP030).

Respectfully submitted,
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